



## Council Agenda Correspondence

**DATE:** February 17, 2026

**TO:** Mayor and Council

**FROM:** Aaron Floyd, Public Works and Utilities Director  
Prepared By: Luke Schwartz, Transportation Manager

**VIA:** Whitney McDonald, City Manager

**SUBJECT:** ITEM #6b - REQUEST TO ADVERTISE THE HIGUERA COMPLETE STREETS AND REVISED 50 HIGUERA WIDENING PROJECTS FOR CONSTRUCTION

Staff received the following questions, regarding the Higuera Complete Streets Project. The questions are below in **bold** with staff's response shown in *italics*:

- 1) The Higuera Complete Streets Project [evacuation study](#) shows modeling using the LADRIS tool. The various models show "addresses evacuated" and "passenger cars." The explanatory text states that 2 cars are evacuating per household as a base assumption. Can you explain how these numbers are calculated? It seems that "passenger cars" should be two times "addresses evacuated."**

*The SLO Fire Safe Council, who prepared the evacuation analysis, uses the LADRIS evacuation model to estimate evacuation demand for both residential and nonresidential properties within the selected zones.*

*The model relies on County land use data and City zoning classifications to assign estimated population and traffic demand to each parcel. For residential properties, the base assumption is generally two vehicles per household.*

*However, "addresses evacuated" does not directly translate to "passenger cars" at a one-to-two ratio because many properties, particularly multifamily and nonresidential uses, may have a single address but contain multiple households or large occupant populations. In these cases, the model estimates maximum occupancy using local land use data and zoning data, then applies a two-persons-per-vehicle factor to project anticipated vehicle counts.*

*Additional verification is conducted using site-specific methods when appropriate. For example, the analysis may:*

- Count the number of trailers in a mobile home park that has a single address,*
- Review the number of beds and staff at a hospital or care facility, or*

- *Evaluate parking spaces at commercial centers or schools to estimate potential vehicle demand.*

*This methodology allows the model to account for single family homes, multifamily developments, mobile home parks, and nonresidential uses in a comprehensive and defensible manner.*

**2) The Zone 25 analysis in the evacuation study shows two different “response times.” What is response time and how is it determined?**

*In the LADRIS evacuation model used for this analysis, “response time” refers to the estimated time between when an evacuation is issued and when evacuees enter the roadway network. In other words, it reflects the time residents take to receive the order, prepare to leave, and begin driving.*

*Response time is an assumed input based on professional judgment and the context of the emergency scenario being analyzed. For suburban wildfire evacuations, a typical modeled response time generally ranges from 30 to 90 minutes, depending on the location and nature of the event.*

*A longer response time does not necessarily mean a longer overall evacuation. While it increases the time before vehicles enter the roadway network, it may also distribute departures over a longer period, reducing peak congestion and improving travel speeds. Conversely, a shorter response time can concentrate vehicle departures, which may increase congestion and slow roadway travel, even though residents begin evacuating sooner.*

*In the evacuation study attached with the Council Agenda Report (dated 1/18/26), the Zone 25 fire scenario inadvertently used a response time of 1 hour and 17 minutes for the “with Complete Streets Project” scenario, while a 1-hour response time was used consistently in the other modeled scenarios.*

*The Zone 25 “with Complete Streets Project” scenario has since been re-run using a 1-hour response time to ensure consistency across all scenarios. The updated analysis results in a total evacuation clearance time of 1 hour and 42 minutes, one second shorter than the previously reported result.*

*In this case, the overall evacuation clearance time remained substantially unchanged because the reduction in assumed response time (residents beginning to evacuate sooner) was offset by a corresponding increase in roadway congestion due to more concentrated vehicle departures.*

*An updated copy of the Evacuation Study is attached to this Agenda Correspondence for reference. The overall findings and conclusions of the analysis remain substantially consistent with the previously provided version.*

- 3) **Can further design measures be considered at the intersection of Higuera and Marsh Street to address the following concerns?**
- A. **Bicyclists traveling southbound on Higuera approaching Marsh Street have to merge across vehicles entering the right-turn lane heading towards the US 101 ramps, which can be uncomfortable.**
  - B. **Eastbound drivers exiting the US 101 ramps and turning right to southbound Higuera frequently do not stop or yield to southbound bicyclists.**

*Yes, additional design measures could be considered at the Higuera/Marsh intersection to address the concerns identified. The following provides additional context for each item.*

*Concern A: Other design strategies were considered to reduce the conflicts between southbound cyclists and right-turning vehicles heading towards the US 101 ramps at Marsh Street. The ideal solution would be to realign the bike lane to remain along the curbside and separate the conflict with right-turning vehicles through a dedicated bicycle signal phase. Under this approach, bicyclists would receive a green signal while right-turning vehicles would receive a red indication during the bicycle phase.*

*This type of treatment is being implemented at the Higuera/Madonna and Higuera/Los Osos Valley Road intersections as part of the current project. However, when this strategy was evaluated for Higuera/Marsh, there were concerns regarding impacts to traffic operations, particularly increased queueing that could extend onto the US 101 off-ramp, as well as associated with signal reconstruction and upgrades. For those reasons, it was not included in the current project scope.*

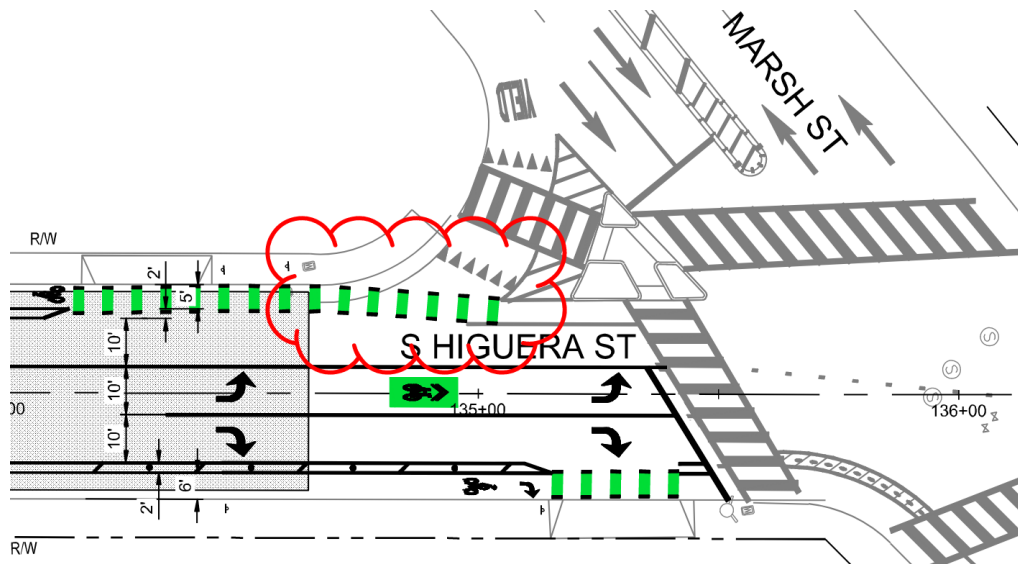
*If there is interest from the Council and community in exploring these strategies, staff would recommend this be considered in a future budget request. This could potentially be incorporated into a broader effort to improve pedestrian and bicycle connectivity between the Higuera/Marsh intersection and the shared-use path near the Madonna Inn, which currently terminates near the Cerro San Luis trailhead parking lot.*

*Concern B: Eastbound drivers exiting the US 101 ramps and turning right onto southbound Higuera have been observed failing to adequately yield to bicyclists.*

*The Higuera Complete Streets Project includes high-visibility green pavement markings through the conflict area to increase awareness of the bicycle crossing and improve yielding behavior (see plan excerpt below for reference).*

Additional measures that could be explored in a future project include removing the existing channelized right-turn configuration and/or converting the right-turn movement from yield control to signal control. Under a signalized configuration, drivers would be legally required to stop on red before proceeding. A similar conversion was recently completed at the westbound approach to the Higuera/Tank Farm intersection, which required traffic signal reconstruction.

These additional treatments would require further traffic analysis, design, and funding but could be evaluated if directed by Council.



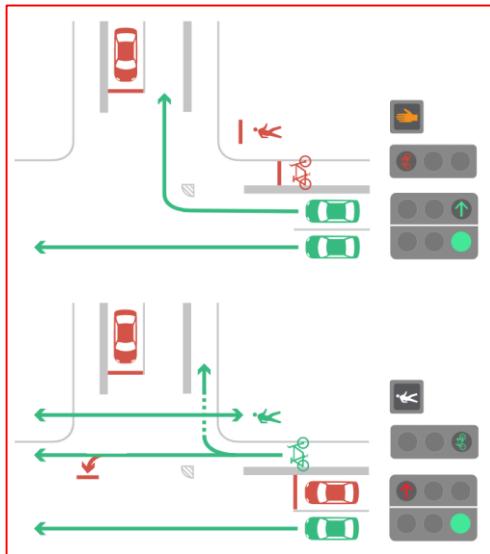
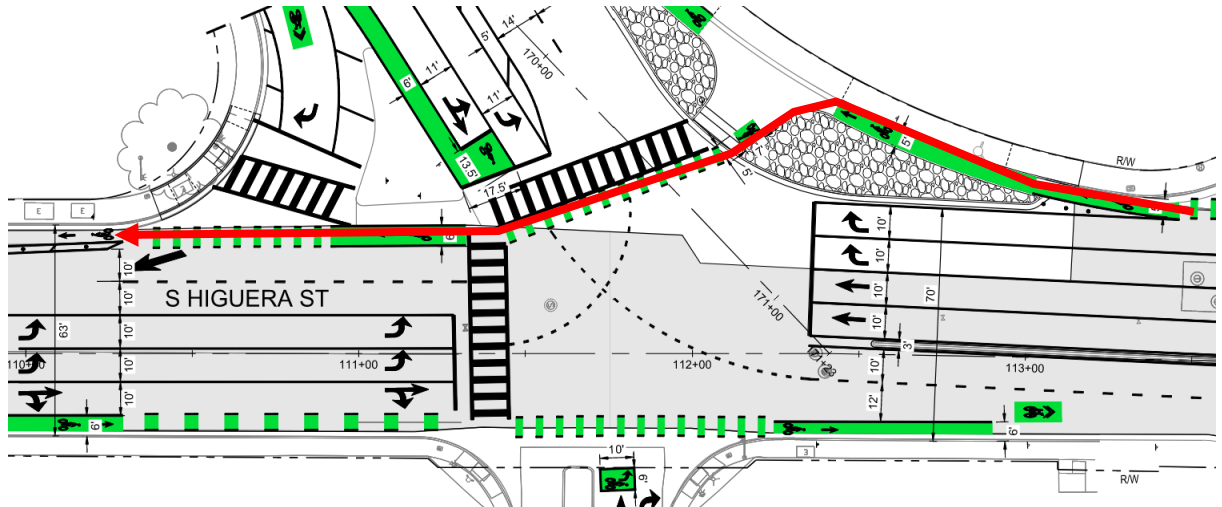
Excerpt from Higuera Complete Street Plans Showing Green Markings Added to Right Turn Conflict Area

- 4) Please confirm the intended path for southbound cyclists to navigate the Higuera & Madonna intersection with the proposed project and how conflicts between cyclists and right-turning vehicles are addressed.

The plans include reconfiguration of the northwest corner of the Higuera/Madonna intersection and modifications to the traffic signal to eliminate the need for southbound cyclists to weave across multiple traffic lanes to continue southbound.

With the proposed improvements in place, southbound cyclists will remain on the right side of the roadway as they approach and enter the intersection. Cyclists will proceed through the intersection using a new dedicated bicycle signal phase. During this phase, right-turning vehicular traffic will receive a red light and will be subject to NO RIGHT ON RED restrictions.

See plan excerpt and example traffic signal phasing graphic below for reference.



- 5) Please confirm how the project improves conditions for cyclists on northbound Higuera Street to navigate the segment between Madonna Road and South Street, and confirm if there are further design measures that can be explored to reduce conflicts between cyclists and vehicles exiting the gas station on the east side of Higuera Street at this intersection?

*Improving conditions for northbound cyclists between Madonna Road and South Street was one of the most significant design challenges in this project.*

*Currently, there is insufficient width along this segment to maintain a dedicated northbound bike lane. As a result, the existing bike lane ends, and cyclists are required to share the traffic lane, including crossing the right-turn lane in order to continue northbound past South Street.*

Staff evaluated options to widen the roadway to accommodate a continuous northbound bike lane; however, this would require roadway widening and could impact the adjacent building frontage. Due to those constraints, widening was determined to be infeasible as part of this project.

A dedicated bicycle signal phase was also considered. However, bicycle signal phases require a dedicated bicycle lane and cannot be implemented where cyclists are sharing a general-purpose travel lane with vehicles. Because a continuous northbound bike lane cannot be accommodated through this segment, a bicycle-only signal phase is not operationally appropriate at this location.

Given these constraints, the project includes the following improvements:

- Installation of green-colored shared lane markings to increase the visibility and awareness of cyclists operating within the travel lane; and
- Improvements to the low-stress, parallel neighborhood greenway route east of Higuera Street via Bridge Street, which provides an alternate northbound route toward downtown for cyclists who prefer to avoid this higher-stress segment of Higuera Street.

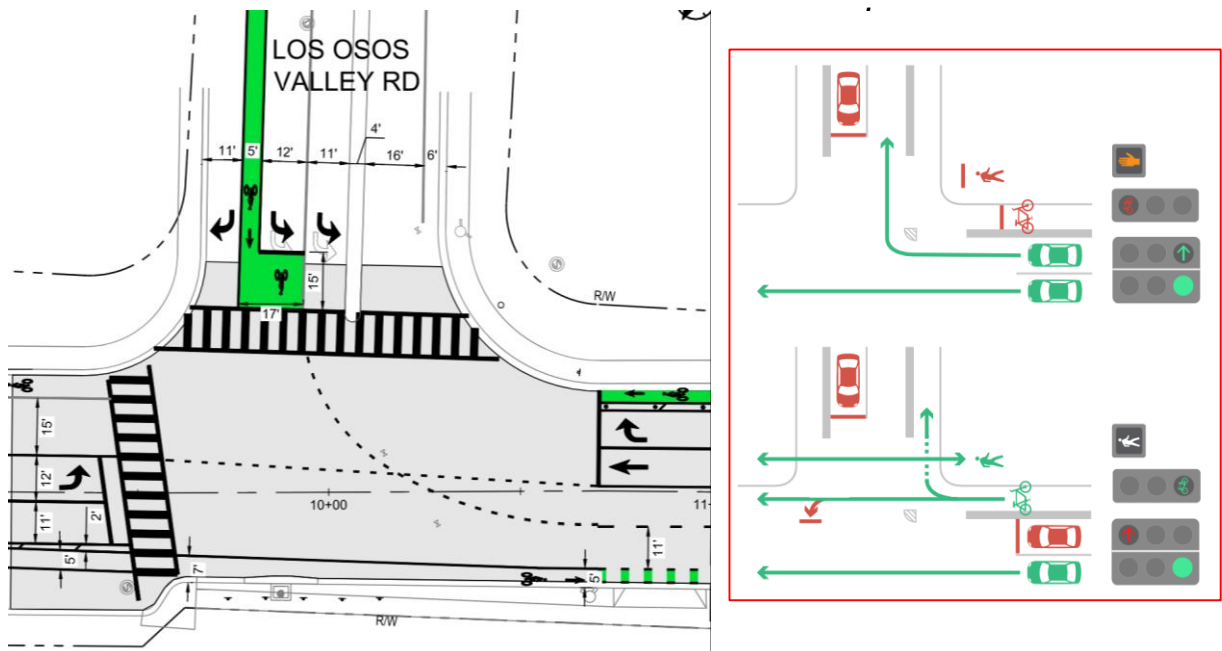
Regarding potential conflicts with vehicles exiting the gas station on the east side of Higuera Street, staff can explore additional bicycle warning signage or pavement markings to further alert exiting drivers to the presence of cyclists. More substantial geometric modifications would require additional study, design, and funding and could be considered as part of a future project if directed by Council.

**6) Please confirm the intended path for southbound cyclists to navigate the Higuera & Los Osos Valley Road intersection with the proposed project and how conflicts between cyclists and right-turning vehicles are addressed. Are there design measures that can be explored to improve options for cyclists traveling northbound on Higuera to make a left turn to westbound Los Osos Valley Road?**

*For southbound cyclists, the design approach at the Higuera/Los Osos Valley Road intersection is consistent with the treatment proposed at Higuera/Madonna.*

*Under the proposed project, the southbound bicycle lane is realigned to remain along the curbside rather than requiring cyclists to weave across right-turning vehicle traffic. A new dedicated bicycle signal phase will allow southbound cyclists to proceed through the intersection while right-turning vehicles receive a red indication. This signal separation reduces vehicle–bicycle conflicts and eliminates the previous merge condition.*

Regarding northbound cyclists seeking to turn left onto westbound Los Osos Valley Road, the current design maintains standard vehicular left-turn operations. Cyclists traveling northbound may merge into the left-turn lane and complete the turn as a vehicle would, or they may use a two-stage turn maneuver (crossing first and then repositioning to complete the turn during a subsequent signal phase).



If Council is interested in further enhancing this movement, staff could evaluate the addition of a bicycle two-stage left-turn box (also known as a bike turn box) on the northbound approach. This treatment—similar to what is proposed on the eastbound Los Osos Valley Road approach—would provide a designated waiting area within the intersection to facilitate a more comfortable two-stage left-turn maneuver for cyclists.

Implementation of this measure would require additional traffic signal evaluation and striping design but could be explored as a refinement if directed by Council.

**7) How much would it cost for “feasibility studies, environmental review and formal design work” to take the Madonna Shared-Use Path along the Madonna Road Overpass to the next stage?**

Based on recent feasibility discussions with Caltrans following publication of the Council Agenda Report, it appears likely that advancing the Madonna Shared-Use Path across the Madonna Road overpass will require widening the existing Madonna Road bridge over US 101 or constructing a separate parallel pedestrian/bicycle bridge in order to safely extend the facility.

*Based on comparable highway bridge projects of similar scale and complexity, staff estimates that preparation of a Project Initiation Document (PID)—including scoping, alternatives analysis, conceptual engineering, structural review, preliminary environmental review, and cost estimating—would likely cost approximately \$300,000 to \$500,000.*

*Advancing a project of this magnitude through environmental clearance and formal design to a shovel-ready phase could require total pre-construction funding in the range of \$3 million to \$5 million, depending on the selected alternative and associated environmental and structural requirements.*

*If Council is supportive of prioritizing advancement of this project prior to development of the FY 2027–29 Financial Plan, Public Works staff would need to evaluate current staffing capacity and funding availability. In addition, advancing this effort would likely require Council direction to defer or reprioritize other active projects or programs in order to accommodate the necessary resources.*

- 8) Does the proposed work on Higuera street address removing the dirt/gravel parking lot driveway intruding into the bike path, located just north of the Chumash Village access? Did the City acquire the rights to remove this property? What is the plan for future right-of-way acquisition, and are there any options for protecting northbound bicyclists where they encounter the lane narrowing due to the narrower street width?**

*Efforts to construct permanent roadway widening, curb, gutter, and sidewalk improvements along the east side of Higuera Street between Margarita Avenue and Fontana Avenue have been underway for several years under a separate Capital Improvement Program (CIP) project.*

*Construction of those improvements, including removal of the dirt/gravel parking lot driveway area encroaching toward the bike lane, requires acquisition of additional off-site right-of-way. To date, attempts to secure the necessary right-of-way have not been successful. The City has not acquired the property rights needed to fully remove and reconstruct that frontage.*

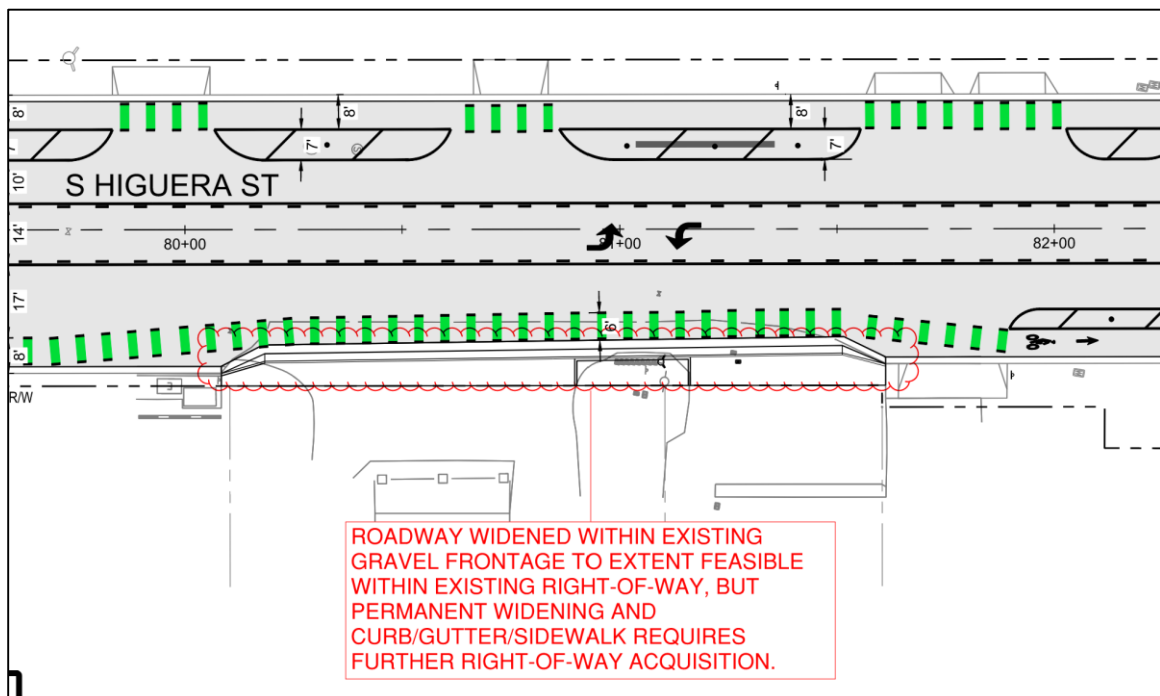
*Earlier conceptual designs for the Higuera Complete Streets Project assumed that these widening improvements could be delivered in advance of, or concurrently with, the Complete Streets work. Due to right-of-way constraints, that assumption proved infeasible.*

*The current Complete Streets Project therefore includes partial roadway widening and temporary gutter/drainage improvements that can be constructed within the existing public right-of-way. These improvements do not preclude future full roadway widening if right-of-way acquisition is ultimately successful.*

Regarding protection for northbound bicyclists through the approximately 200-foot constrained segment north of Chumash Drive: this stretch includes a bus stop and multiple driveways without formalized curb cuts. Due to these access points and the limited roadway width, installation of continuous vertical separation (such as curb-protected bike lanes or delineator posts) is not feasible at this time.

To improve visibility and awareness within these constraints, the project includes continuous dashed green pavement markings through the narrowed segment to highlight the shared space and increase driver awareness of bicyclists. While no physical separation is provided under the current design, additional protective measures could be revisited in the future if right-of-way acquisition is achieved and the corridor can be fully reconstructed.

See the attached plan excerpt for additional detail on the design treatment at this pinch point.



- 9) With the additive concrete barriers, are our fire vehicles capable of clearing them in case of emergency where the turning lane is unavailable?

The proposed concrete barriers are not intended to be mounted by emergency vehicles or passenger vehicles. The barriers are approximately 6 inches in height with rounded edges. While it may be physically possible for certain vehicles to mount them in a dire emergency, the project design assumes that mounting the barriers is not required for standard emergency response or evacuation operations.

*Project designs are reviewed with emergency service providers under the assumption that emergency vehicles should be able to operate within the available travel lanes and turning movements without the need to traverse vertical separation elements.*

*Similarly, while flexible delineator posts could potentially be driven over in an extreme situation, it is not desirable for emergency vehicles, or passenger vehicles, to rely on mounting vertical elements for routine access.*

*There are examples of vertical bikeway separators that can be more easily mounted by emergency vehicles or passenger vehicles, such as [small rubber "armadillos"](#), low-height rounded [rubber](#) or [concrete](#) curbs; however, there are also trade-offs with these options:*

- *Any vertical element that can be easily mounted, will also be inherently less effective at preventing undesired vehicle encroachment into the bike lanes*
- *If bikeway vertical features are designed to allow emergency vehicles to mount and straggle them, then taller non-mountable vertical elements, such as flex posts, need to be omitted or used very sparingly. This approach limits the vertical visibility of these low-height barriers, which can increase potential for accidentally crashes into the vertical elements by vehicles and cyclists. See examples of low-height (3"-4") mountable bikeway curbs in the City of Long Beach:*
  - [Costa Del Sol Way Bikeway](#)
  - [E Del Amo Boulevard Bikeway](#)

*It should also be noted that mountable low-height curb systems are typically constructed as cast-in-place concrete (poured directly onto the roadway surface). Unlike the proposed pre-cast concrete barriers included in the project Bid Additive Alternative, cast-in-place curbs are not easily removable if future operational adjustments are desired.*

*If Council prefers a more mountable separator design, staff can further evaluate that option; however, it would involve balancing emergency flexibility, day-to-day safety performance, visibility, and long-term adaptability.*

**10) Do the flex post barriers create just as much additional cost/challenge for clearing the bike lanes, or is there a difference between how we clear the lane with each barrier type?**

*In general, ongoing bike lane sweeping costs are expected to be similar whether flex posts or concrete barriers are used—provided the bikeway width is insufficient to accommodate the City's standard mechanical street sweeper, which requires approximately 11 feet of clear width.*

*Where the bikeway is narrower than that threshold, maintenance crews must use smaller, more specialized equipment or manual methods to clear debris, and that operational approach would be required regardless of barrier type.*

*There are, however, differences in durability and replacement costs. Flex posts typically have lower upfront costs but are more susceptible to damage over time and may require more frequent replacement. Concrete barriers are generally more durable and less likely to require routine replacement, but they have higher initial installation costs.*

*It is worth noting that the flex post mounting system proposed for this project is designed to allow relatively straightforward replacement compared to some other post systems, which can reduce labor time when repairs are needed.*

**11) Is the plan for the Walker Street closure completely in line with what is presented in the Mid-Higuera Enhancement Plan? I wasn't sure if the plans as presented here are a modification or a simplification of that vision. Is it only Walker between Pacific and Pismo that will be impacted?**

*The proposed Walker Street closure is functionally consistent with the vision outlined in the Mid-Higuera Enhancement Plan; however, the current project represents a more modest, interim implementation rather than the full long-term buildout envisioned in that plan.*

*The Mid-Higuera Enhancement Plan contemplates a more robust transformation of Walker Street, including widening the roadway to create a formal cul-de-sac, raising the street to sidewalk grade, and constructing a permanent pedestrian plaza with landscaped planters, trees, and public art.*

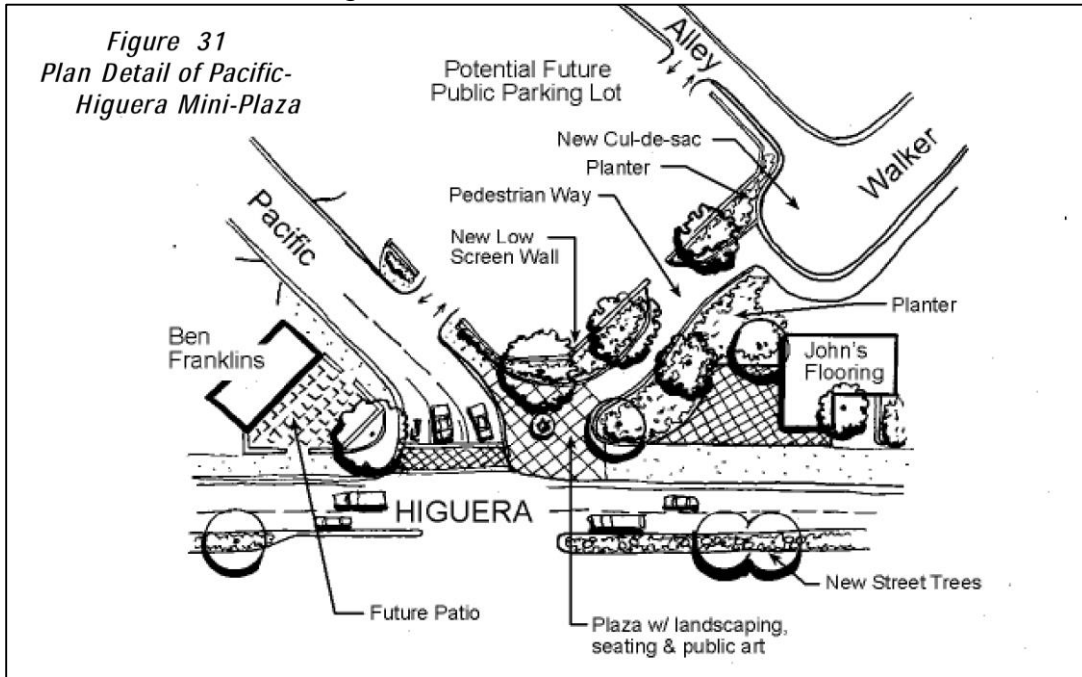
*Advancing this long-term vision at this time would require:*

- Significant additional capital funding,*
- Acquisition of off-site private right-of-way to provide width for an emergency vehicle turnaround, and*
- Additional hydraulic analysis and drainage improvements—the existing intersection is within the floodzone, so grading changes such as brining the street up to a sidewalk level would require more significant analysis and mitigation of flooding concerns.*

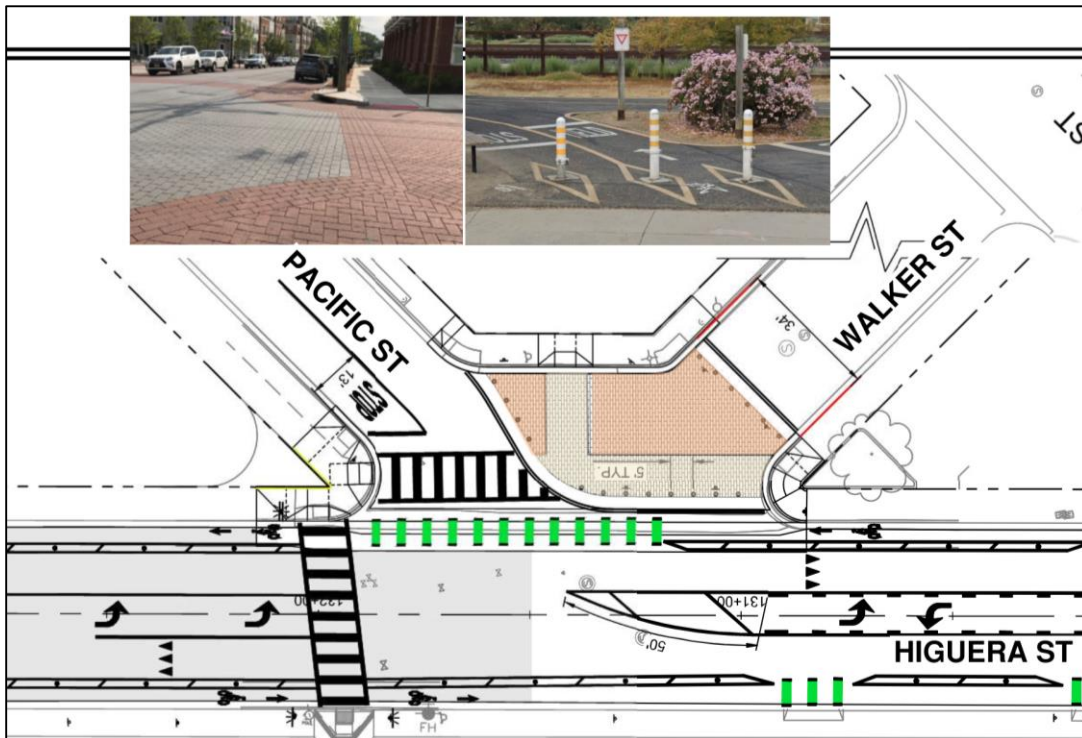
*The current project advances the functional and safety objective identified in the Mid-Higuera Enhancement Plan, closing one leg of the irregular intersection consistent with the Mid Higuera Enhancement Plan with more interim to improve safety and simplify operations, while implementing more interim improvements that can be constructed within the existing public right-of-way and available budget.*

Importantly, the proposed design does not preclude future construction of the more permanent pedestrian plaza envisioned in the Mid-Higuera Enhancement Plan, should funding and right-of-way acquisition opportunities arise.

The closure only impacts Walker Street between Pacific Street and Pismo Street, consistent with the configuration shown in the Enhancement Plan.



Excerpt from Mid Higuera Enhancement Plan



*Excerpt from Higuera Complete Street Plans*

**12) Does the section of Higuera between Bridge and Margarita see the highest bicycle traffic of this corridor?**

*Based on the latest traffic count data available, the average daily bicycle volumes along Higuera Street between Marsh and Los Osos Valley Road range from apx. 200-350 bikes/day.*

*In general, bike volumes are slightly higher north of Madonna Road than south of Madonna.*

*The segment between Bridge Street and Margarita had a volume of apx. 235 bikes/day, similar to other segments south of Madonna Road. Based on this data, the Bridge–Margarita segment does not appear to carry the highest bicycle volumes within this corridor.*

**13) I like all the language about monitoring and modifying the project based on performance. It seems like that mostly applies to removing components. Are we easily able to make pedestrian and bicycle infrastructure more robust in areas if we continue to have safety issues in particular areas?**

*The ability to strengthen pedestrian and bicycle infrastructure depends on the type of improvements desired. Low-cost measures—such as additional radar speed feedback signs, extra green pavement markings, minor traffic signal adjustments, additional flex posts, or warning signs—can generally be installed quickly and at reasonable cost. More substantial measures—like adding concrete curbs, raising bike lanes to sidewalk level, major signal modifications, significant lighting upgrades, or intersection reconstruction—would require more time and funding. In monitoring “after project” conditions, staff will also take in public feedback and findings from crash data to guide future recommendations and areas for improvement.*

**14) If concrete curb separators are not included in the project, could they be added later? Are there additional costs associated with doing them later versus with the current project?**

*Yes, concrete curb separators can be added later if the Council chooses not to include them in the initial construction. There may be some additional cost due to mobilization and potential construction escalation, but it is not expected to be substantial.*

*It is important to note that some form of bikeway separation is required to meet the project’s current grant funding requirements. Deferring all vertical elements (flex posts and concrete curbs) could require relinquishing the grant, rescoping the project under non-grant funds, or pursuing future grants to fund these elements.*

**15) Do the estimated evacuation times account for the "evacuation signal timing plans" discussed on page 332?**

*No, the LADRIS software is a planning-level model and does not have the capability to reflect detailed traffic signal operations in estimating evacuation clearance times. The results provided in the evacuation study are assumed to be conservative, in that they do not reflect the recommendation to pre-program evacuation signal timing plans.*

**16) If the flex posts require more maintenance, how does the higher upfront cost of concrete curbs compare to the long term increased maintenance cost of the flex posts?**

*Based on a planning-level calculation, it is expected that over a 20-year timeframe, using concrete curbs (between Bridge Street and Margarita only) would reduce the maintenance costs associated with replacing flex posts by apx. \$90,000-\$120,000, but would incur an additional upfront construction cost of \$300,000-\$500,000.*

**17) Since the Elks Lane traffic signal is a required mitigation for the Prado Creek Bridge Project, is the signal fully funded from that project's budget?**

*The current recommendation is to transfer \$500,000 from the Prado Creek Bridge Project to the Complete Streets Project, which is estimated to cover the costs specific to this new traffic signal, excluding curb ramp upgrades, traffic control, paving, sign and striping costs, which will likely exceed this \$500,000 amount and be covered from other project funding sources. If desired, the Council could direct staff to transfer additional funds from the Prado Creek Bridge Project if actual bids for the Higuera/Elks traffic signal come in higher than \$500,000.*

**18) There are a few intersections along S. Higuera where bike boxes are being added to easy left turns for those on bikes. However, I note these features are not being proposed for the S. Higuera/Prado intersection or the Margarita/S. Higuera intersection. (p 354/355) Would these be appropriate additions for those two intersections? Why or why not?**

Staff evaluated the feasibility of adding two-stage left-turn bike boxes at the noted intersections.

- At Higuera/Margarita, a northbound two-stage turn box could potentially be accommodated.
- At Higuera/Prado, and for the southbound direction at Higuera/Margarita, there is insufficient roadway width to accommodate bike boxes without impacting other critical elements.

It should also be noted that the Higuera/Prado intersection is planned to be reconstructed as a protected intersection as part of the Prado Creek Bridge Project. That future configuration is expected to significantly improve comfort and safety for cyclists making left turns on all approaches.

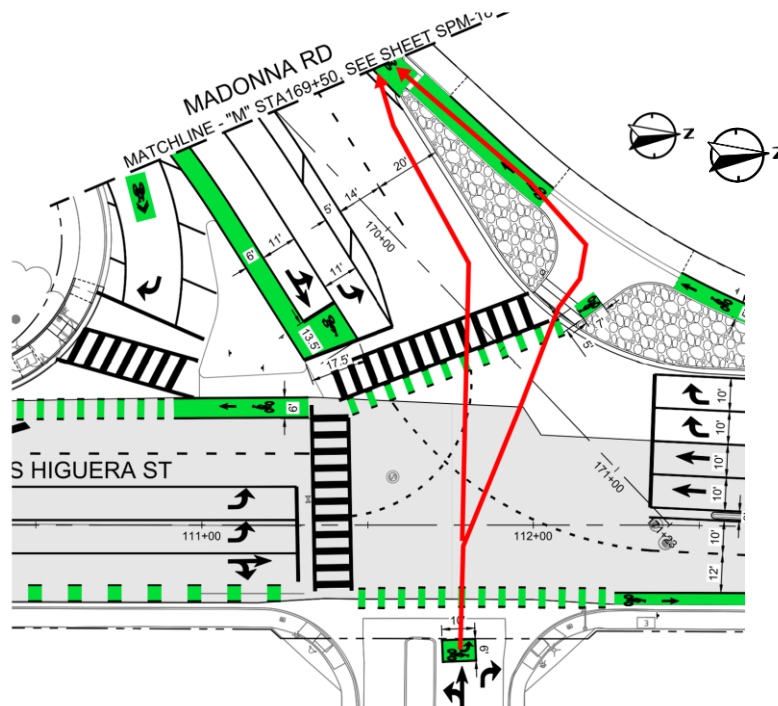
19) Page 359 of the packet shows the intersections at Bridge Street and South Higuera as well as Madonna/S. Higuera. Great changes are proposed for Bridge/S. Higuera. And there are also changes proposed for southbound bike/car traffic on South Higuera and for those turning right onto Madonna. However, can you please clarify:

- a) What intended path of travel would be for riders leaving the shopping center driveway, continuing onto Madonna?

*As shown in the image below, cyclists exiting the Pacific Coast Center and desiring to continue westbound to Madonna Road would have two options:*

1. *Use the bike/pedestrian ramp at the northwest corner to access the westbound bike lane; or*
2. *Continue in the vehicle lane briefly and merge into the street-level westbound bike lane downstream.*

*Under the current and proposed signal phasing, no other vehicles are permitted to turn onto westbound Madonna Road concurrently with westbound cyclists. Therefore, under Option 2, cyclists would not encounter conflicting turning vehicle traffic, other than vehicles also exiting the shopping center driveway.*



- b) What safety enhancements are being proposed for bikes heading northbound on S. Higuera leading up to the intersection at South/S. Higuera where there is currently a “choke point” where I believe several bike accidents have occurred?

*See staff response to Question #3 above.*

- 20) It appears that Additive Alternative A contains only the cost of concrete curbs? Does the estimated cost of Additive Alternative A at \$258k include an estimated cost of installation as well?**
- a. If the estimated cost of the additive alternative is such a small cost, in relation to the rest of the costs of the total project, why not include it in the base bid?**
  - b. Will the project come back to council after the bids are received to determine whether or not we want to include construction of the Additive Alternative A?**

*The estimated cost of Additive Alternative A is approximately \$358,000 and includes materials, installation, and contingency.*

*These estimates are based on bid results from other cities that have used this specific type of custom pre-cast concrete curb. Because this product has not been widely used locally, actual bid costs could vary.*

*While Additive Alternative A represents a relatively small portion of the total project cost, staff is mindful of overall project cost, volatility in the local bidding environment, and limited available funding. Including concrete curbs as a bid additive provides flexibility to include or omit this feature depending on actual bid results and funding availability.*

*Current grant funding does not require a specific separator material, only that the approved quantity of protected bike lanes be delivered. Therefore, Council retains flexibility to implement concrete curbs now or in a future phase without risking current grant funding.*

*If desired, staff can return to Council for direction prior to construction contract award, regardless of whether bids allow funding of both the base project and Additive Alternative A.*

## **ATTACHMENT**

**A – Updated Higuera Complete Streets Evacuation Study (Dated February 13, 2026)**